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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,901	10/29/2003	Cesar H. Proano	005513.P015	9235

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EXAMINER	
RAHMJOO, MANUCHER	
ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/697,901	PROANO ET AL.	
	Examiner	Art Unit	
	MIKE RAHMJOO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *1-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/16/2009 has been entered.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

As per claim 17- 19 and 24- 25 applicant recites “first charge” and “first pulse”. Applicant also recites “second charge” and “second pulse” in claims 20- 22 and 27. [0033] of the specification teaches “a second pulse 495 may be applied directly to the storage capacitors (e.g., capacitors 140, 142, and 144) of scanner 100 such that the sensing circuits 180 (e.g., capacitors 140, 142 and 144) store charge driven through finger 110 and also a constant charge due to pulse 495”. Examiner only notices "a second pulse 495” and fails to see distinctions made as to the remaining recited portions as claimed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16- 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Products (e.g., machines and manufactures) must distinguish over the prior art in terms of their structure (or structure + structure's function when claimed functionally) rather than function alone (MPEP 2114). Therefore, a "machine" that has no structural limitations at all violates 112, 2nd paragraph, in that it fails to "particularly point out and distinctly claim the subject matter which applicant regards as the invention". Accordingly claims 16- 25 are rejected under 112, 2nd paragraph.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16- 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Setlak (US Patent 5963679) in view of Bird et al (US Patent 6108438), hereinafter, Bird.

As per claims 16 and 26 Setlak teaches an insulator (i.e., layer 52) see for example fig. 7;

a plurality of electrodes coupled to the insulator(i.e., sensing electrode 78) see for example fig. 7. Column 7, lines 5- 10 describes said sensing electrode as an array of pixels or sensing elements corresponding to a plurality of electrodes. Said plurality of sensing elements are shown in fig. 4- 5 and because there is a plurality of sensing elements 30a, there is a plurality of capacitors 83 and 85. Figures 9 and 15 are respective diagrams showing this structure;

driving a first charge (i.e., excitation drive amplifier 74 charging excitation electrode 71) initiated from a conductive structure adjacent to the pixel array (i.e., layer 54), through a portion of a hand in contact with he conductive structure(i.e., the portion in contact with layer 54), through the finger in contact with the insulator, into at least one of the plurality of storage capacitors see for example fig. 7.

However, Setlak does not explicitly teach a plurality of storage capacitors. Setlak teaches the shield electrode 80 is an active shield which is *driven* by a portion of the output of the amplifier circuit 73 to help focus the electric field energy and, moreover, to thereby reduce the need to drive adjacent electrodes and therefore the sensor 30 permits all of the sensing elements to be driven by *a coherent drive signal* in sharp contrast to prior art sensors which required that each sensing electrode be individually driven see for example column 7 lines 10- 17.

Bird teaches means for sensing the capacitance (i.e., claim 1 and the capacitive sensing elements) and a plurality of storage capacitors, each of the plurality of storage

capacitors coupled to a corresponding one of the plurality of electrodes corresponding to for example fig. 3 and 5 and capacitors 35 and 51. Bird also teaches application of positive and negative pulses via row and column conductors 18 and 20 in fig.1, 2 and 4.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings Bird into Setlak to provide a Plurality of storage capacitors to contact the plurality of the electrodes to help drive adjacent electrodes wherein the individual capacitances of these capacitors, dependent on the spacing of the fingerprint portions from the sense electrodes as determined by the presence of a ridge of a trough of the fingerprint, are measured by sensing the current which flows in the column conductors during their charging and therefore each row of sense elements is addressed in this manner in turn and the variation in sensed capacitances produced over the array of sense elements by a fingerprint ridge pattern provides an electronic image or representation of the three dimensional form of the fingerprint surface see for example column 1 lines 34- 47.

As per claim 17 Setlak broadly teaches the first charge is driven through the portion of the hand in contact with the conductive structure (i.e., fig. 7 conductive layer 54) and the finger using a first pulse(i.e., the excitation drive signal provided by amplifier 74 and excitation electrode 71 of fig. 7).

As per claim 18 Setlak broadly teaches the first pulse has a negative voltage (i.e., the AC excitation see for example column 8 line 32).

As per claim 19 Setlak broadly teaches the first charge is driven into a first contact of the storage capacitor coupled to a corresponding electrode (i.e., the charge driven into capacitors 83 and 85 via amplifier circuit 73 and 74 to layer 78 as the corresponding electrode see for example column 7 line 12 and fig. 8- 9).

As per claim 20 Bird teaches driving a second charge into a second contact of the storage capacitor (i.e., voltage signal into row or column conductor see for example column7, lines 7- 32 and fig.1,2, 4).

As per claim 21 Bird teaches the second charge is driven directly into the storage capacitor using a pulse (i.e., application of positive voltage pulse signal) see for example column 7 lines 12.

As per claim 22 Bird teaches the pulse has a negative voltage(i.e., row conductor voltage as negative voltage V0 see for example column 7 line 20).

As per claim 23 Setlak broadly teaches driving a second charge into a second contact of the storage capacitor, wherein the second charge is driven directly into the storage capacitor using a second pulse (i.e. second electric filed between the sensing electrode 78 and the finger see for example column 7 lies 21- 22 and fig. 8 -9).

As per claim 24 Setlak broadly teaches the first pulse has a positive voltage (i.e., the AC excitation see for example column 8 line 32).

As per claim 25 Bird broadly teaches the first pulse has a voltage difference in the approximate range of 0.5V to 1V (i.e.., 5 to 10 mv in column 7 line 36).

As per claim 27 Bird teaches means for driving a second charge into a second contact of the at least one of the plurality of storage capacitors (i.e., fig. 3 and 5 capacitors 33 and 51 respectively).

Response to Arguments

Applicant's arguments with respect to claim16-27 have been considered but are moot in view of the new ground(s) of rejection.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

January 24, 2009

/Mike Rahmjoo/

Examiner, Art Unit 2624